

REMARKS

The Official Action mailed October 30, 2006, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on April 9, 2004; December 8, 2005; and July 20, 2006.

Claims 8-22 were pending in the present application prior to the above amendment. Claims 8 and 10-13 have been amended to better recite the features of the present invention, and new claims 24-26 have been added to recite additional protection to which the Applicant is entitled. The Applicant notes with appreciation the allowance of independent claims 9-13 and dependent claims 15-22 (pages 4 and 5, Paper No. 20061023). It is noted that, due to the multiple dependency of claims 14 and 15, claims 14 and 15 as they depend from claims 10, 11 and 13 appear to be allowed; whereas, claims 14 and 15 as they depend from claim 8 appear to stand rejected. Accordingly, claims 8-22 and 24-26 are now pending in the present application, of which claims 8-13 and 24 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

The Official Action objects to claims 8 and 10-13 regarding a lack of antecedent basis for the recitation of "the same photomask." In response, claims 8 and 10-13 have been amended by changing "with the use of the same photomask" to "by a photomask," thus providing positive antecedent basis for "photomask." Accordingly, reconsideration and withdrawal of the objections are in order and respectfully requested.

The Official Action rejects claims 8, 14 and 16 as obvious based on the combination of U.S. Patent No. 5,650,339 to Saito and U.S. Patent No. 6,905,920 to Higashi. The Applicant respectfully submits that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims, as amended. Independent claim 8 has been amended to recite forming a first conductive film over a first insulating film, heat-treating a semiconductor film, the first insulating film, and the first conductive film, patterning the semiconductor film, the first insulating film, and the first conductive film into island shapes by a photomask after heat-treating the semiconductor film, the first insulating film, and the first conductive film to form an island-shaped semiconductor film, an island-shaped gate insulating film, and a first island-shaped conductive film after the heat-treating step, and patterning the first island-shaped conductive film and the second conductive film to form a gate electrode. In other words, the claims recite heat-treating a semiconductor film, a first insulating film, and a first conductive film before patterning these films. These features are supported in the present specification, for example, by

Figures 1(A) to 2(E). For the reasons provided below, Saito and Higashi, either alone or in combination, do not teach or suggest the above-referenced features of the present invention.

The Official Action concedes that Saito does not teach or suggest "heat-treating the semiconductor film and the first conductive film" (page 3, Paper No. 20061023). The Applicant respectfully submits that Saito also does not teach or suggest heat-treating a semiconductor film, a first semiconductor film, and a first conductive film.

Higashi does not cure the deficiencies in Saito. The Official Action asserts that Step 5 (column 10, lines 41-54; ST5; Figure 1) of Higashi, which is an annealing process for insulating film 106, corresponds with heat-treating a semiconductor film and a first insulating film before patterning these films (page 3, Id.). However, Higashi does not teach or suggest heat-treating a first conductive film or heat-treating the first conductive film before patterning the first conductive film.

Therefore, the Applicant respectfully submits that Saito and Higashi, either alone or in combination, do not teach or suggest forming a first conductive film over a first insulating film, heat-treating a semiconductor film, the first insulating film, and the first conductive film, patterning the semiconductor film, the first insulating film, and the first conductive film into island shapes by a photomask after heat-treating the semiconductor film, the first insulating film, and the first conductive film to form an island-shaped semiconductor film, an island-shaped gate insulating film, and a first island-shaped conductive film after the heat-treating step, and patterning the first island-shaped conductive film and the second conductive film to form a gate electrode.

Since Saito and Higashi do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

New claims 24-26 have been added to recite additional protection to which the Applicant is entitled. The features of claims 24-26 are supported in the present

specification, for example, at Figures 1(A) to 2(E). The Applicant respectfully submits that new claims 24-26 are in condition for allowance.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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